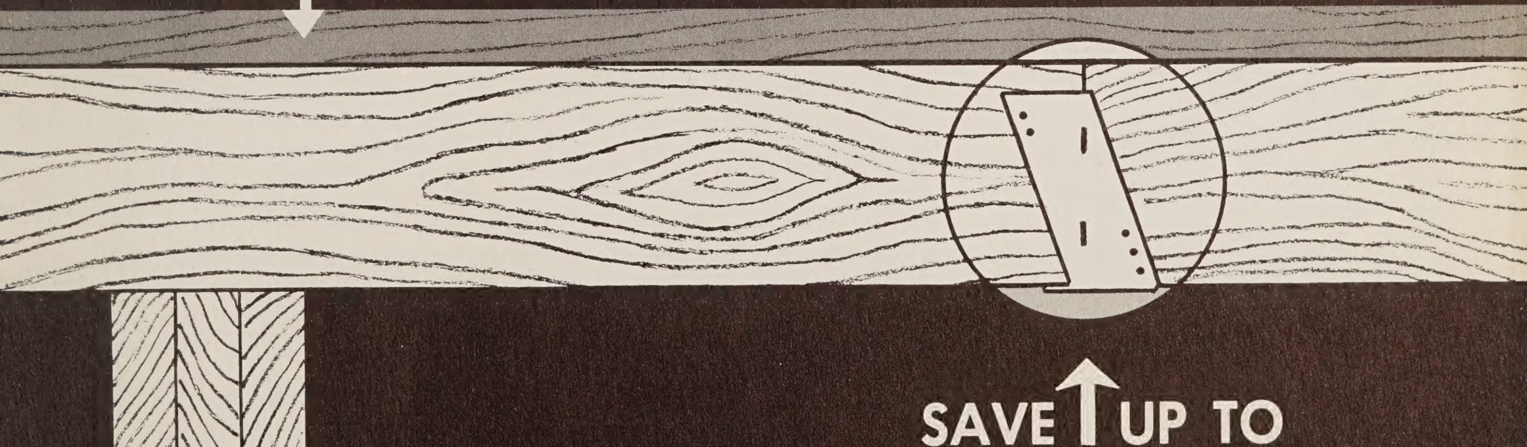
LINEAJOIST
CONNECTORS

Another NEW Product by

TECO

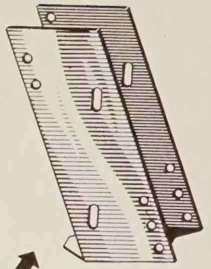


SAVE THIS MUCH MATERIAL

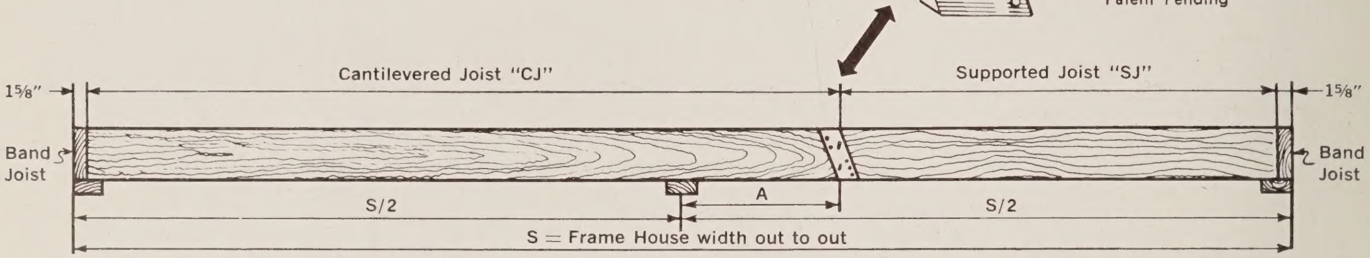
SAVE UP TO
$30.00 Per House
Through Cantilevered Design

TECO LINE-A-JOIST Connectors

Save $30 or more per house in material
Reduce labor through in-line joist assembly



Patent Pending



WHERE USED

Through utilization of cantilevered design principles TECO Line-A-Joist connectors make it possible to get more mileage out of wood floor joists in residential and garden apartment construction. Example: Normally a 28′ span house requires floor joists made of 2 x 10 members. With the Line-A-Joist system, the same span might be framed with 2 x 8 members with equal if not improved performance, provided that TECO design tables and working dimensions are observed.

The Line-A-Joist system is designed for use **only** where there are non-load bearing partitions resting on the floor joists. However, a load-bearing partition **is** permitted directly over the central or off-set support. Location of supports, amount of cantilever and joist member sizes are specified in TECO design tables which are available on request.

A further direct saving of the Line-A-Joist system results from the use of "in-line" joists. This type of assembly permits economical application of sub-flooring by minimizing cutting required and therefore saves both material and labor.

ILLUSTRATIVE APPLICATION

Assume that a 30′ x 40′ house is to be built using the Line-A-Joist system. According to TECO Design Tables, the long joist (cantilevered joist—CJ) will be 17′-8¾″ long. The short joist (supported joist — SJ) will be 12′ long. This takes into consideration the use of a band joist or header. Joists in masonry walls may be trimmed from the exterior ends as required provided that there is suitable bearing area and the cantilevered "A" dimension is maintained. In selecting a joist size, either fibre stress in bending or modulus of elasticity will govern the selection, depending upon the species used.

DESCRIPTION

Manufactured from 16 gauge, zinc coated sheet steel, TECO Line-A-Joist connectors are available in three sizes as shown in the table below. Supplied with each carton of connectors are special hardened steel nails, 1½″ long x 0.135″ diameter.

TYPES AND SIZES OF TECO LINE-A-JOIST CONNECTORS

Type	Joist Size	Height	Seat Width	Seat Depth	Shipping Wt. Per 100 Pcs.	Standard Packaging (Pcs. per. ctn)
H-6	2 x 6	5″	1⅝″	2½″	65#	50
H-8	2 x 8	7″	1⅝″	2¼″	80#	50
H-10	* 2 x 10	9″	1⅝″	2″	88#	50

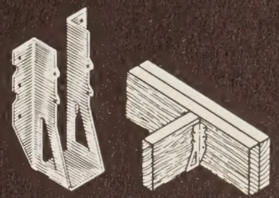
* Type H-10 connectors may be used where TECO Design Tables permit 2 x 12.

TECO

TIMBER ENGINEERING COMPANY

"The Standard of Excellence" in Wood Fastenings

TECO-U-GRIP JOIST AND BEAM HANGERS



WHERE USED:

Available for 2x4 to 4x14 wood joists and beams including double 2x6's to double 2x14's at one-half the cost of old style joists and strap hangars, Teco-U-Grips are engineered to provide a proper balance between the load carrying capacity of the hanger and the joist or beam it supports. So designed as to eliminate all unnecessary or "non-working" metal, the device makes use of special nails in transferring loads from the joist to the header.

SPECIFICATIONS:

Teco-U-Grips are precision manufactured from zinc coated sheet steel in gauges as indicated in the table below. Special nails are furnished with each carton of hangers in the sizes shown so that there is no chance of the carpenter using the wrong size of nail. Only one size nail is used with each hanger to avoid confusion or error as to "what size nail goes where."

Laboratory tested, Teco-U-Grips meet FHA Minimum Property Standards and are approved under the Uniform Building Code.

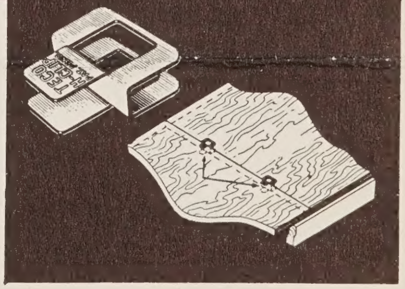
TYPE	RECOMMENDED JOIST OR BEAM SIZE	STEEL GAUGE	HEIGHT	SEAT WIDTH	SEAT DEPTH	RECOMMENDED SAFE WORKING VALUES (¼ ultimate)	NAILS PACKED IN EACH CARTON	
							WIRE GAUGE	LENGTH
24	2x4	18	3¼″	1⅝″	1½″	400 lbs.	11	1¼″
A-28	2x6 to 2x10	18	5″	1⅝″	2″	900 lbs.	9	1½″
B-28	2x10 to 2x14	18	8½″	1⅝″	2″	1200 lbs.	9	1½″
A-36	3x6 to 3x10	16	5¼″	2⅝″	2¾″	1700 lbs.	6	2⅛″
B-36	3x10 to 3x14	16	8½″	2⅝″	2¾″	2800 lbs.	6	2⅛″
A-46	4x6 to 4x10	16	5¼″	3⅝″	2¾″	1700 lbs.	6	2⅛″
B-46	4x10 to 4x14	16	8½″	3⅝″	2¾″	2800 lbs.	6	2⅛″
AD-6	2-2x6 to 2-2x10	16	5¼″	3¼″	2¾″	1700 lbs.	6	2⅛″
BD-6	2-2x10 to 2-2x14	16	8½″	3¼″	2¾″	2800 lbs.	6	2⅛″

NOTES: 1. Recommended safe working values may be increased ⅓ (or as provided by local practice) for wind or earthquake loading.

2. With the exception of Type 24, Teco-U-Grips are available in heavier gauge steel although no increase in recommended safe working values will result. Types A-28 and B-28 are available in 16 gauge steel. All other types (except type 24) are available in 14 gauge steel.

3. Values for all types except Type 24, A-28 and B-28 can be increased 350# if two ⅜″x2½″ lag bolts are used (one each per header flange).

TECO H-CLIP PLYWOOD SUPPORTS



WHERE USED:

Designed as an economical support for plywood roof sheathing, Teco H-Clips are laboratory tested and meet FHA Minimum Property Standards as substitutes for solid blocking in accordance with the table shown below. The special design of H-Clips provides for a tight, snug fit, thus lessening any possibility of the clips falling off during installation. A "leveling" arm insures easy installation regardless of any variations that may exist in plywood thicknesses.

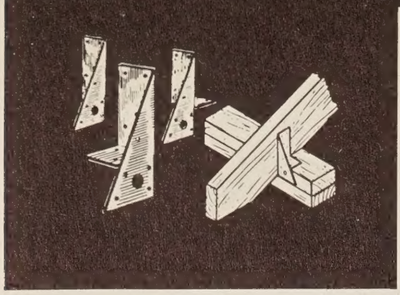
SPECIFICATIONS:

Teco H-Clips are precision stamped and formed from 18 gauge galvanized corrosion resistant sheet steel and are available for ⅜″, ½″, ⅝″ and ¾″ plywood thicknesses.

ASPHALT OR WOOD SHINGLES			BUILT-UP ROOFING		
PLYWOOD THICKNESS (Douglas Fir)	CONVENTIONAL CONSTR.	USING TECO H-CLIPS (1 Clip)	PLYWOOD THICKNESS (Douglas Fir)	CONVENTIONAL CONSTR.	USING TECO H-CLIPS (1 Clip)
⅜″	20″ O. C.	24″ O. C.	⅜″	16″ O. C.	24″ O. C.
½″	24″	32″	½″	20″	32″
⅝″	28″	42″	⅝″	24″	42″
¾″	32″	48″ (2 clips)	¾″	28″	48″ (2 clips)

Span Data from Table 8-13, Page 151, FHA Minimum Property Standards

TRIP-L-GRIP FRAMING ANCHORS



WHERE USED:

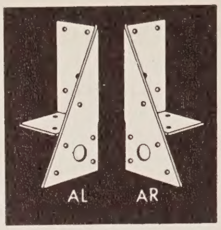
Although primarily designed for use in roof (tying rafters and trusses to plates), wall, floor and ceiling framing, Trip-L-Grips are so adaptable they can be used in practically any connection in wood construction.

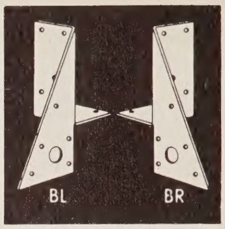
SPECIFICATIONS:

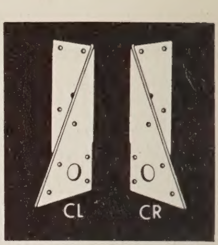
Precision manufactured from 18 gauge, zinc coated sheet steel, Trip-L-Grips are available in three basic styles with a left and right of each style. Each anchor is 4 7/8″ high. The rectangular flange is 1 5/8″ wide, the triangular flange is 2 3/8″ wide, and the bent portion of the A and B types is 1 5/8″ long.

Special Trip-L-Grip nails of 11 gauge wire and only 1 1/4″ long are included with each carton of framing anchors. Approximately equal to 8d common nails, half-length, these nails develop maximum shear without splitting lumber.

Technical data on safe design loads shown here are recognized by building departments, the Federal Housing Administration and the Uniform Building Code.







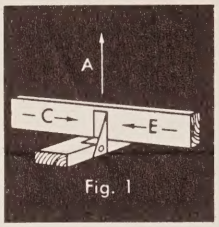


Fig. 1

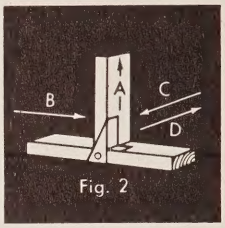


Fig. 2

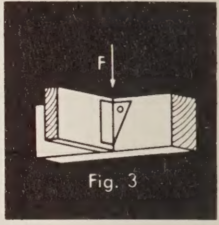


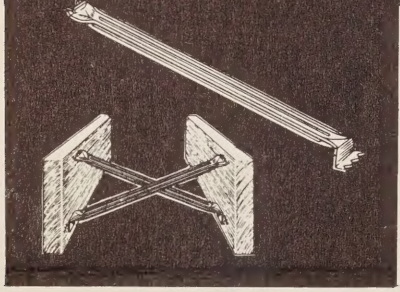
Fig. 3

RECOMMENDED SAFE WORKING VALUES

Direction of Load (Figs. 1-2-3 above)	A	B	C	D	E	F
Short Term Loading (Wind or Earthquake)	450	825	420	300	450	675
Long Term Loading (Live & Dead Loads)	300	530	290	200	300	450

Values given are for one anchor in pounds.

TECO FAS-LOK METAL BRIDGING



THE MODERN BRIDGING THAT NEEDS NO NAILS

FAST! ECONOMICAL! STRONG!

- No nails required — specially designed projections grip wood fibres.
- Sturdy — made of 18 gauge rust resistant galvanized steel 1 1/8″ wide.
- Specially ribbed "V" section provides extra strength.
- Economical in price.
- Saves costly cutting, mitering and nailing.
- Installed in one operation either before or after sub-floor is down.
- Only a few hammer blows required for installation.
- Compression type — stays tight.
- Saves up to 80% labor costs.
- Meets FHA Minimum Property Standards.

SPECIALLY ENGINEERED FEATURES MAKE THIS THE FASTEST AND STRONGEST BRIDGING OBTAINABLE

TYPE	JOIST SIZE & SPACING
8-16	2x8's - 16″ o.c.
10-16	2x10's - 16″ o.c.
12-16	2x12's - 16″ o.c.

Shipping weight per 100 pcs. - 31 lbs.

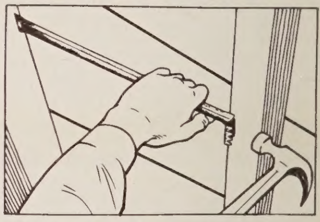
TYPE	JOIST SIZE & SPACING
8-24	2x8's - 24″ o.c.
10-24	2x10's - 24″ o.c.
12-24	2x12's - 24″ o.c.

Shipping weight per 100 pcs. - 51 lbs.

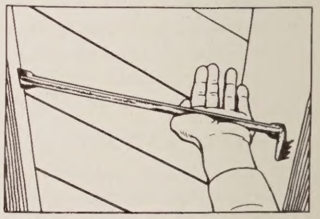
TYPE	JOIST SIZE & SPACING
8-12	2x8's - 12″ o.c.
10-12	2x10's - 12″ o.c.
12-12	2x12's - 12″ o.c.

Shipping weight per 100 pcs. - 25 lbs.

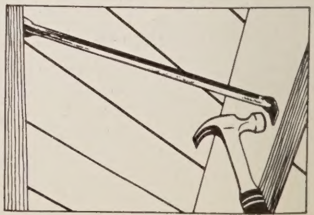
INSTALLATION



Using hammer at lower end, drive upper end into joist 1/2″ to 3/4″ from top.

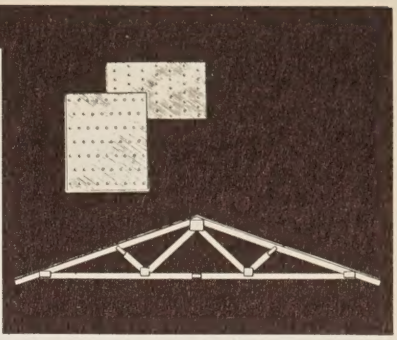


Shove lower end upward into position.



Drive "Lazy Nail" into joist, completing installation.

TECO TRUSS PLATES



WHERE USED:

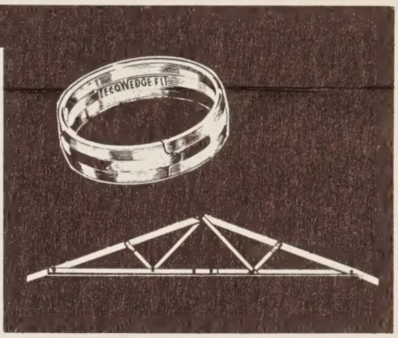
Where single plane assembly of residential and other types of light roof trusses is desired, Teco truss plates provide economical clear span construction without the requirement for costly fabricating equipment. No special presses or rollers are needed for the proper assembly of members. In most situations an efficient fabricating line can be set up for less than $300.00.

SPECIFICATIONS:

Manufactured from 20 gauge zinc coated sheet steel, Teco truss plates are pre-punched to receive 8d 1½″ length nails. The Teco plate system accommodates spans ranging from 16′ to 32′ and slopes of from 2½:12 to 7:12. Designed in accordance with FHA Minimum Property Standards the system is covered by FHA Bulletin SE 297.

Complete details on the design and fabrication of Teco truss plates are available free upon request.

TECO WEDGE-FIT SPLIT RINGS



WHERE USED:

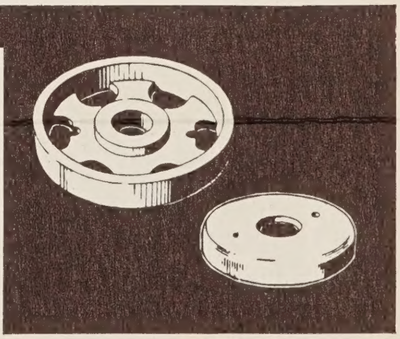
Available in 2½″ and 4″ diameters, Teco split rings are used primarily in the assembly of clear span wood roof trusses for spans ranging from 20′ to 250′. Placed in specially made grooves in overlapping members the rings develop maximum strength in the joints by distributing the stress over a greater area. The special wedge shape of the ring section provides maximum tolerance for easy insertion at the same time insuring a tight-fitting joint when the ring is fully seated in the conforming groove. Generally the 2½″ diameter ring is used for lighter trusses and trussed rafters utilizing 2″ lumber; the 4″ diameter ring is used for heavier trusses using 3″ and heavier material.

SPECIFICATIONS:

Teco Wedge-Fit split rings are manufactured from hot-rolled SAE 1010 carbon steel which is specially milled to provide a double bevelled edge permitting efficient installation. Conforming grooves for Teco split rings are cut with a precision made grooving tool which can be used in a power drill with ½″ chuck. Detailed information on installation tools is available on request.

Catalog No.	Inside Diameter	Depth	Bolt Diameter	Lumber, Minimum Dimensions	
				Ring in One Face	Rings in Both Faces
M-1	2½″	¾″	½″	1″ x 3⅝″	1⅝″ x 3⅝″
M-2	4″	1″	¾″	1″ x 5½″	1⅝″ x 5½″

TECO SHEAR PLATES



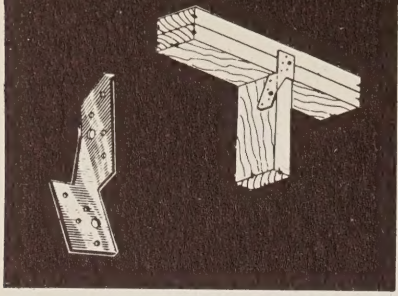
WHERE USED:

Teco shear plates are special connectors designed for both wood to steel and wood to wood applications. Some popular wood to steel connections include: attachment of columns to footings through steel straps; fastening of steel gusset plates to wood members; connection of steel heel straps and splice plates in bowstring trusses, glued laminated arches and beams. In wood to wood applications Teco shear plates are used where demountability is desired.

SPECIFICATIONS:

Teco shear plates are available in 2⅝″ and 4″ diameters. The 2⅝″ shear plates are made of hot-rolled SAE 1010 carbon steel. The 4″ size is made of malleable iron in accordance with ASTM Specification A 47-52, Grade 35018. Conforming daps for Teco shear plates are cut with precision grooving and dapping tools. Detailed information on installation tools is available on request.

Catalog No.	Outside Diameter	Depth	Bolt Diameter	Lumber, Minimum Dimensions	
				Plate in One Face	Plates in Both Faces
143-F	2⅝″	.42″	¾″	1⅝″ x 3⅝″	1⅝″ x 3⅝″
258-F (with central hub)	2⅝″	.415″	¾″	1⅝″ x 3⅝″	1⅝″ x 3⅝″
143-D	4″	.62″	¾″	1⅝″ x 5½″	1¾″ x 5½″
143-Da	4″	.62″	⅞″	1⅝″ x 5½″	1¾″ x 5½″



TECO DU-AL-CLIP FRAMING ANCHORS

WHERE USED:

Designed as an all-purpose economy framing device, Du-Al-Clip framing anchors are used in roof, wall, ceiling, and floor framing applications where lighter loads and shorter spans are involved. A special feature is a long flange which permits the anchor to grip the second plate in rafter to plate applications.

SPECIFICATIONS:

Du-Al-Clip framing anchors are manufactured of 18 gauge, zinc coated, sheet steel in a single style with both right and left hand types. Nailing is provided on two surfaces. Each Du-Al-Clip is 5½″ long. The rectangular flange and the wing shaped flange are 1⅝″ wide. Special Du-Al-Clip nails of 11 gauge wire and 1½″ long are packed in each carton of anchors.

Du-Al-Clips meet FHA Minimum Property Standards and are approved under the Uniform Building Code.

RECOMMENDED SAFE WORKING VALUES

Values shown are for one anchor in pounds

Direction of Load (Figs. 1-2-3)	Long Term Loading* (Live and Dead Loads)
A	400
B	300
C	120
D	400

Fig. 1

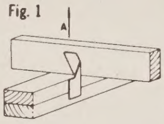


Fig. 2

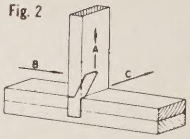
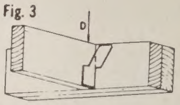
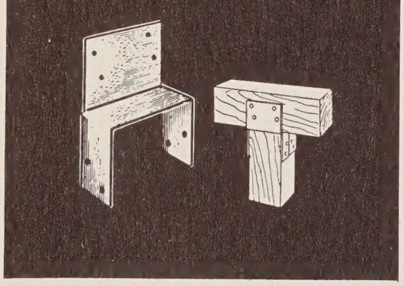


Fig. 3



*The above values for permanent load may be increased from 33 1/3% to 50% for short duration loading such as wind and earthquake, depending upon local building code practice.



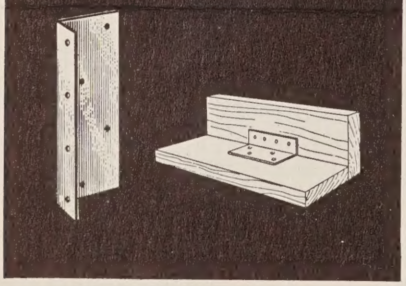
TECO POST CAPS

WHERE USED:

Teco post caps are used either singly or in pairs when tying 4x4 or 4x6 post and beam connections together. The load requirement or the nature of the connection will determine whether one or two caps shall be used.

SPECIFICATIONS:

Precision manufactured from 16 gauge, zinc coated corrosion resistant sheet steel, Teco post caps are formed with two rectangular flanges 1 11/16″ and 2⅝″ providing nailing on each side of the 4x4 or 4x6 post and a single flange 3⅝″ x 2¾″ providing nailing to the beam. The placement of the cap can be reversed where desired. Furnished with each carton of post caps are special 9 gauge, 1½″ long nails. Acting in shear these nails provide a resistance to uplift of 480#.



TECO ANGLES

WHERE USED:

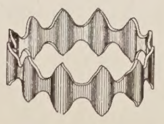
Teco Angles are designed primarily for general utility use wherever wood to wood connections are involved. Some popular applications where the product is used for efficient framing include: posts to beams and plates; beams to girders and solid blocking to plates.

SPECIFICATIONS:

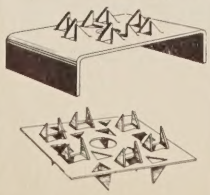
Manufactured from 16 gauge galvanized corrosion resistant sheet steel and available in 3″, 5″, 7″ and 9″ lengths, Teco Angles consist of two flanges formed at 90 degrees. The smaller flange is 1½″ wide and the larger flange is 2½″ wide. Furnished with each carton of Angles are special 9 gauge 1½″ long nails which provide a value of 120 pounds per nail in shear.

Other popular TECO products available:

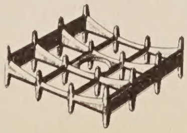
TECO Toothed Rings



TECO Clamping Plates



TECO Spike Grids



TIMBER ENGINEERING COMPANY

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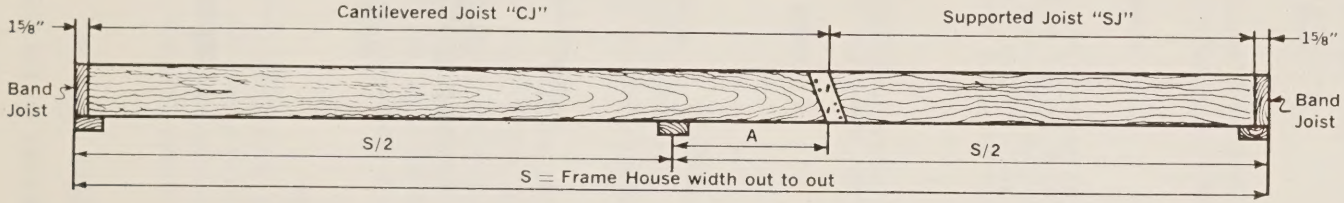
SAN FRANCISCO 681 Market Street (5) LOS ANGELES 3121 E. 12th Street (23)

For more detailed information on TECO timber connectors and framing devices, send for a free copy of our 12-page TECO products catalog.

INSTALLATION INSTRUCTIONS — TECO Line-A-Joist Connectors

1. **SELECTION OF JOIST SIZES** — Permissible floor joist sizes, selected on basis of spans and working stresses of lumber, are shown in design tables. Sizes are computed for condition where support is centrally located. Available on request are tables showing permissible joist sizes where the support is 1′ off center. Ask for table II.

2. **CUTTING OF JOISTS** — It is essential that the cantilevered "A" dimension be adhered to when cutting floor joists. Schedules on this page show cutting lengths for cantilevered joists "CJ" and supported joists "SJ" for all three support conditions. Joists are placed as shown below.



Special Design Recommendation

Where there may be different loading and/or deflection requirements than those covered by the design tables on the reverse side, please contact TECO for recommended joist sizes and cutting dimensions. Be sure to send complete information including loads, span (out to out), location of interior support and species of lumber selected for use.

ILLUSTRATIVE APPLICATION

Assume that the house to be framed measures 28′ x 40′ with the support centrally located (Table I). Assume further that West Coast Hemlock, 1150f or better, is to be used. Table I shows that 2x8 joists are permitted for this span when this species is selected for use. Joist Cutting Schedule A shows that the cantilevered joist "CJ" will be 16′-0″. The cantilevered "A" dimension **must be** 2′-1⅝″. The supported joist "SJ" will therefore be 11′-8¾″. (These dimensions take into consideration the use of a band header. Joists in masonry walls may be trimmed from the exterior ends as required, provided that there is suitable bearing area and the cantilevered "A" dimension is maintained.)

JOIST CUTTING SCHEDULE A (Central Support)

SPAN(S)	CANTILEVERED JOIST (CJ)	SUPPORTED JOIST (SJ)	DIMENSION "A"
20′ - 0″	11′ - 8¾″	8′ - 0″	1′ - 10⅜″
22′ - 0″	12′ - 8¾″	9′ - 0″	1′ - 10⅜″
24′ - 0″	14′ - 0″	9′ - 8¾″	2′ - 1⅝″
26′ - 0″	15′ - 0″	10′ - 8¾″	2′ - 1⅝″
28′ - 0″	16′ - 0″	11′ - 8¾″	2′ - 1⅝″
30′ - 0″	17′ - 8¾″	12′ - 0″	2′ - 10⅜″
32′ - 0″	18′ - 8¾″	13′ - 0″	2′ - 10⅜″
34′ - 0″	19′ - 8¾″	14′ - 0″	2′ - 10⅜″
36′ - 0″	20′ - 8¾″	15′ - 0″	2′ - 10⅜″

JOIST CUTTING SCHEDULE B (1 ft. offset)

This information available on request.

INSTALLATION STEPS

a. **Cantilevered Joist** — Nail Line-A-Joist connector to end of cantilevered joist "CJ" before placing on foundation. Fit connector seat snugly against bottom of joist (see Figure 1). Position connector so that alignment slots fall over end of joists (see Figure 2). Use special nails supplied in each carton. Place cantilevered joist "CJ" on one side of foundation and nail to support locations.

b. **Supported Joist** — Insert end of supported joist "SJ" into seat of Line-A-Joist connector (see Figure 3) and rest other end on foundation. Line up joists so that top edges are even. Complete installation using special nails.

c. **Sub-Flooring** — Always start application from cantilevered joist "CJ" side of floor. When using sheet material, start with 2 ft. width material for spans indicated by (*) and continue with 4 ft. material. **(Note: If desired, sub-flooring can be applied to cantilevered "CJ" side of floor before installation of supported joists "SJ".)**

d. **Plaster and Drywall** — Where possible, joints in drywall should not occur closer than 1 ft. from the Line-A-Joist connection with nailing at least 6″ or more from joint. Where plaster board is used nail at least 2″ from Line-A-Joist connector.

Special Note — Joists should not be shipped or handled in "pre-assembled" form.

Figure 1 (under side of joist)

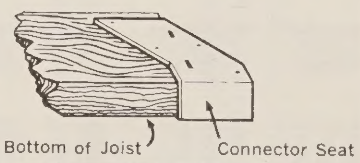


Figure 2

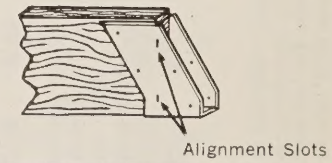
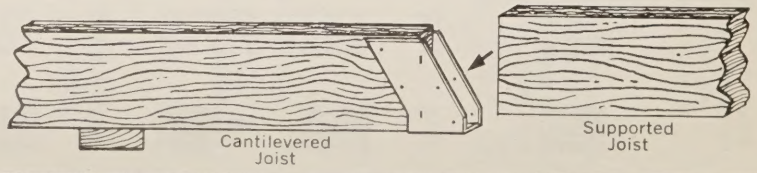


Figure 3



Moisture content of lumber shall not exceed 19% at time of installation.

TABLE 1 — SUPPORT LOCATED IN CENTER

Recommended Joist Sizes for Use With TECO Line-A-Joist Connectors
(Assuming 16" C. to C. Spacing, 40#/sq. ft. Uniform Live Load[1])

(For 30#/sq ft loading use same size joist except as follows: (1) Where sizes are underlined use next lower size joist; (2) where x appears use 2x12 joists.)

Species	20'	22'	24'	26'	28'	30'	32'	34'	36'
CEDAR, Incense & Western Red									
Select Merch.[2]	2x6	2x8	2x8	2x8	2x10	2x10	2x10	2x12	2x12
Construction[2]	2x8	2x8	2x8	2x8	2x10	2x10	2x10	2x12	2x12
Standard[2]	2x8	2x8	2x10	2x10	2x10	2x12	2x12	2x12	2x12
Utility[2]	2x10	2x10	2x10	2x10	2x12	x	x	x	
CYPRESS									
Stress Grade 1300f or Better	2x6	2x8	2x8	2x8	2x8	2x10	2x10	2x10	2x12
No. 1 Common[2]	2x6	2x8	2x8	2x8	2x8	2x10	2x10	2x10	2x12
DOUGLAS FIR (Coast & Rky Mtn & Larch)									
Stress Grade 1200f or Better	2x6	2x6	2x8	2x8	2x8	2x8	2x10	2x10	2x10
Utility J & P[2]	2x8	2x8	2x10	2x10	2x10	2x10	2x12	2x12	2x12
FIR, WHITE									
Select Merch. and Construction[2]	2x6	2x8	2x8	2x8	2x10	2x10	2x10	2x10	2x12
Standard[2]	2x8	2x8	2x10	2x10	2x10	2x10	2x12	2x12	2x12
Utility[2]	2x8	2x8	2x10	2x10	2x12	x	x	x	
HEMLOCK, Eastern									
Stress Grade 950f or Better	2x6	2x8	2x8	2x8	2x10	2x10	2x10	2x10	2x12
No. 1 Common[2]	2x8	2x8	2x8	2x8	2x10	2x10	2x10	2x10	2x12
No. 2 Common[2]	2x8	2x8	2x10	2x10	2x10	2x10	2x10	2x10	2x12
HEMLOCK, Western									
Stress Grade 1150f or Better	2x6	2x6	2x8	2x8	2x8	2x8	2x10	2x10	2x12
Utility J & P[2]	2x8	2x8	2x10	2x10	2x10	2x10	2x10	2x12	2x12
LARCH (See Douglas Fir above)									
PINE, Eastern White									
No. 1 Dimension	2x8	2x8	2x8	2x10	2x10	2x10	2x10	2x12	2x12
PINE, Western White									
No. 1 Dimension[2]	2x8	2x8	2x8	2x10	2x10	2x10	2x10	2x12	2x12
No. 2 Dimension[2]	2x10	2x10	2x10	2x10	2x12	2x12	2x12	2x12	
No. 3 Dimension[2]	2x10	2x10	2x12	2x12	2x12	x	x	x	
PINE, Red									
Stress Grade 950f or Better	2x6	2x8	2x8	2x8	2x8	2x10	2x10	2x10	2x12
No. 1 Dimension[2]	2x8	2x8	2x8	2x8	2x10	2x10	2x10	2x10	2x12
PINE, Southern									
Stress Grade 1200f or Better	2x6	2x6	2x8	2x8	2x8	2x8	2x10	2x10	2x10
REDWOOD, California									
Stress Grade 1350f or Better	2x6	2x8	2x8	2x8	2x8	2x10	2x10	2x10	2x12
Select Heart[2]	2x8	2x8	2x8	2x8	2x8	2x10	2x10	2x10	2x12
Construction Heart or Sap Common[2]	2x8	2x8	2x8	2x8	2x10	2x10	2x10	2x10	2x12
Merch.[2]	2x8	2x8	2x10	2x10	2x10	2x12	2x12	2x12	x
SPRUCE, Red & White									
Stress Grade 1200f or Better	2x6	2x8	2x8	2x8	2x8	2x10	2x10	2x10	2x12
No. 1 Dimension (NELMA)[2]	2x6	2x8	2x8	2x8	2x8	2x10	2x10	2x10	2x12
No. 1 Dimension (NHPMA)[2]	2x8	2x8	2x8	2x8	2x10	2x10	2x10	2x10	2x12
SPRUCE, Engelmann									
Construction[2]	2x8	2x8	2x10	2x10	2x10	2x12	2x12	2x12	2x12
Standard[2]	2x10	2x10	2x12	2x12	2x12	x	x	x	
Utility[2]	2x10	2x10	2x12	2x12	2x12	x			
SPRUCE, Sitka									
Select Merch.[2]	2x6	2x8	2x8	2x8	2x8	2x10	2x10	2x10	2x12
Construction[2]	2x6	2x8	2x8	2x8	2x8	2x10	2x10	2x10	2x12
Standard[2]	2x8	2x8	2x10	2x10	2x10	2x10	2x12	2x12	2x12
Utility[2]	2x10	2x10	2x10	2x10	2x12	x	x	x	

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[1] Design loads, working stresses, and limitations on deflection are taken from FHA Minimum Property Standards and assume a dead load of 10#/sq.ft. and only non-load bearing partition on the floor. Recommended sizes do not apply where there are load bearing partitions except where such partitions fall over the support. Double joists are used at locations as normally found in conventional floor framing (i.e. stair openings and under non-load bearing partitions parallel to the joist). Deflection is limited to 1/360th of the clear span between supports due to total live plus dead load up to spans of 15' between supports. Over 15' the deflection due to total load was limited to 1/2 inch.

[2] Non-stress graded material.

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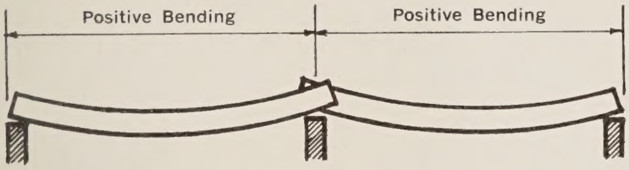
How the TECO LINE-A-JOIST Floor System Works

In conventional construction, the floor joists are either lapped or butted together over a central support. In the new TECO Line-A-Joist system, **one** of the joists is cantilevered beyond the central support and joined to a shorter joist through the use of the Line-A-Joist Connector. In effect, the connector transfers shear from one joist to another. The long joist is referred to as the "cantilevered" joist. The short joist is referred to as the "supported" joist.

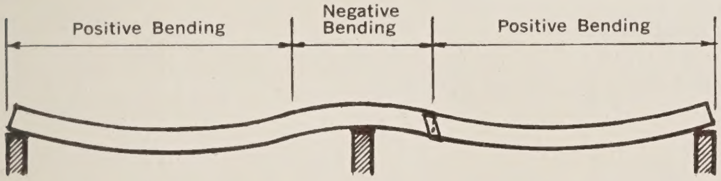
In conventional joist framing, there is what is known as "positive" or downward bending in both spans between the exterior walls and the central support. This means that the joists are very highly stressed at the center of the span. In the Line-A-Joist system there is bending of two types . . . "positive" (downward) and "negative" (upward). This combined bending has a very beneficial effect when a uniform load is applied. Note that near the exterior walls there is "positive" bending, while near the central support there is "negative" bending.

In the Line-A-Joist system, the "negative" bending in effect counterbalances the "positive" bending, which stresses the joist more uniformly. Actually, the Line-A-Joist floor system is designed so that the "positive" bending equals the "negative" bending.



This illustration shows the "positive" or downward bending that occurs in conventional framing.

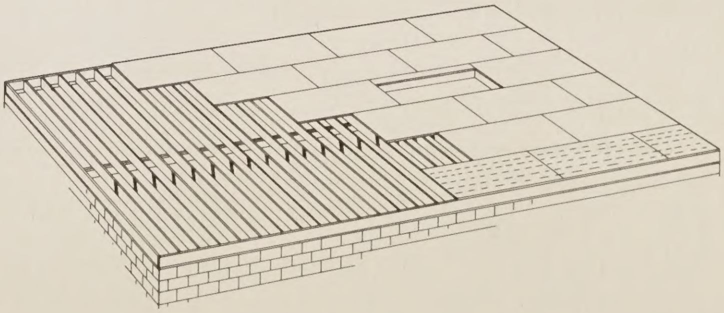
BUT . . . .



This illustration shows the combination of "positive" (downward) and "negative" (upward) bending that occurs in the TECO Line-A-Joist system. The two types of bending counterbalance each other, which stresses the joists more uniformly and uses the material more efficiently.

The use of TECO Line-A-Joist connectors does not mean that the builder can automatically reduce his joists to the next smaller size. However, comprehensive design tables prepared by TECO show the sizes permissible for given spans.

Tests have been conducted to determine performance of this system under concentrated loads. All tests were favorable, even when using the thinnest and most brittle flooring and sub-flooring. The safety factor on the connection was higher than that normally used for wood connections.



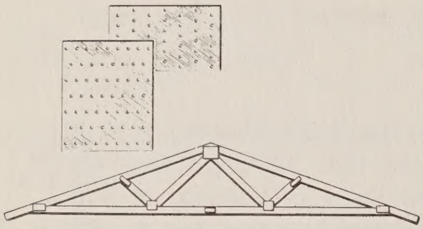
The "in-line" floor system made possible through the use of TECO Line-A-Joist connectors facilitates the application of **modular** sizes of floor sheathing materials to **modular** spacing of floor joists. Result: with the Line-A-Joist system there is **less** cutting and **faster** installation of material.

STRUCTURAL WOOD FASTENERS

by Timber Engineering Company TECO

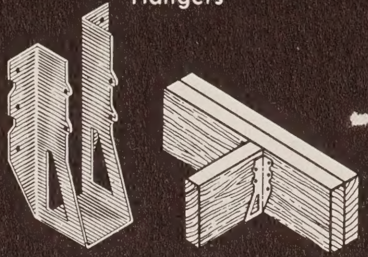
TECO TRUSS PLATES

For Single Plane Roof Trusses



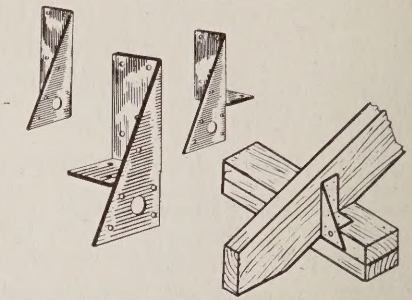
TECO-U-GRIP

Joist and Beam Hangers

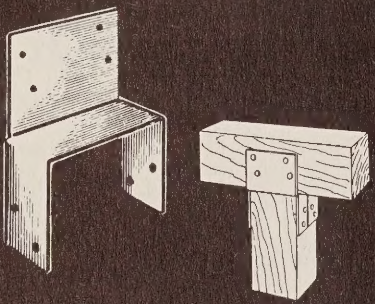


TECO TRIP-L-GRIP

Framing Anchors



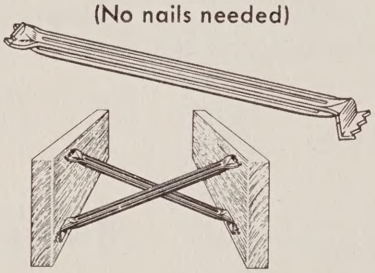
TECO POST CAPS



TECO FAS-LOK

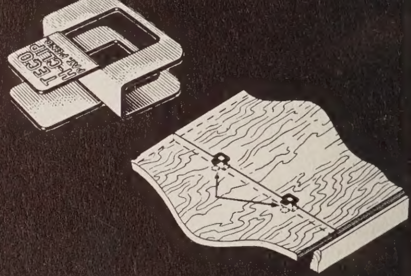
Bridging

(No nails needed)



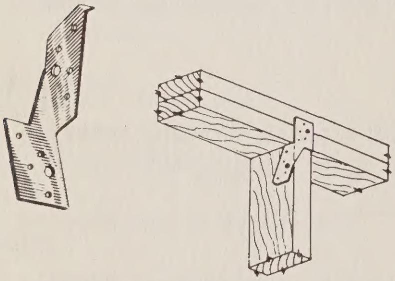
TECO H-CLIP

Plywood Supports



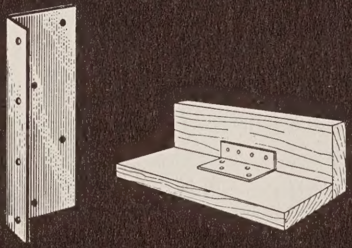
TECO DU-AL-CLIP

Framing Anchors



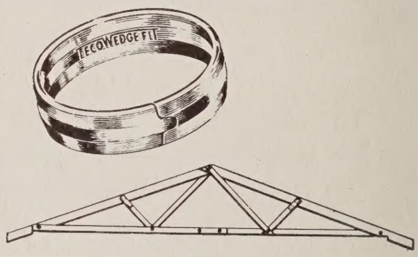
TECO ANGLES

. . . the utility framing device



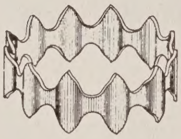
TECO SPLIT RINGS

For TECO Roof Trusses

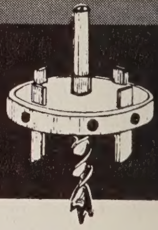


TECO SHEAR PLATES

TECO TOOTHED RINGS



TECO GROOVING TOOLS



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